

COMMON COURSE OUTLINE: Course discipline/number/title: COMP 2220: Concepts of computer Programming Using Visual Basic

A. CATALOG DESCRIPTION

1. **Credits:** 4
2. **Hours/Week:** 4 (hands on compiler time scheduled as needed)
3. **Prerequisites (Course discipline/number):** MATH 0099 or appropriate RCTC placement score into MATH 1115; college level reading
4. **Co-requisites (Course discipline/number):** None
5. **MnTC Goals (if any):** NA

A course for non-computer science majors to introduce the concepts of data representation, algorithms, and programming in a high-level language. Algorithm development, modular design, and program debug. This course is intended for students who need an introduction to programming without the computer science theory content of the computer science programming sequence. **RECOMMENDED ENTRY SKILLS/KNOWLEDGE:** Basic computer literacy, Math skills—ready for college algebra.

B. DATE LAST REVISED (Month, year): March, 1997

C. OUTLINE OF MAJOR CONTENT AREAS:

1. Problem solving approaches
2. Program development process
3. Introduction to algorithms
4. Introduction to compiled languages
5. Input and output
6. Arithmetic expressions
7. Logical and relational expressions
8. Selection control structures
9. Looping control structures
10. Arrays
11. Strings
12. Records/Structures
13. Sort and search algorithms

D. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Understand the rudiments of data storage within a digital computer.
2. Define the concept of an algorithm.
3. Define the concept of a high level language.
4. Design algorithms using modular design concepts.
5. Document algorithms using flowcharts or pseudo code.
6. Write and document programs using:
 - a) Simple data types, arrays and records.
 - b) Input and output from keyboard/screen and files.
 - c) Sequential, selection, and looping control structures.
 - d) Subprograms.
7. Compile, link, and run programs.
8. Test and debug programs.

E. LEARNING OUTCOMES (MNCTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:

1. Tests
2. Programming assignments

G. SPECIAL INFORMATION (if any): None